

REMARKS/ARGUMENTS

Claims 1-14 are active in this application, new claims 13-14 having been added by the present amendment. The claims have been amended to place them in more standard US patent claim form, which changes are supported by the claims as originally filed. Additionally, Claim 2 has been amended to replace the phrase “or of a mixture (blend) of various thermoplastics” with the phrase “or a mixture or blend thereof”. This amendment is supported by the claim as originally filed and the specification at pages 5-12, which describe the various types of thermoplastics and mixtures/blends of thermoplastics that preferably make up the matrix. New claims 13-14 specify that the crosslinking and/or graft-linking agent contained in the matting agent of the present invention is present in an amount of from 0.05 to 0.49% by weight (claim 13) or from 0.1 to 0.4% by weight (claim 14). These claims are supported by the specification at page 13, lines 1-3. No new matter has been added by these amendments.

The present invention relates to a moulding composition, comprising

- a) from 50 to 99.9% by weight of a matrix composed of a thermoplastic polymer and
- b) from 0.1 to 50% by weight of a matting agent in the form of a (meth)acrylate copolymer dispersed in the matrix.

The matting agent is a (meth)acrylate copolymer which has been prepared from the following monomers,

- b1) from 50 to 95% by weight of methyl methacrylate
- b2) from 5 to 50% by weight of C₁-C₆-alkyl acrylates
- b3) from 0.01 to less than 0.5% by weight of a crosslinking monomer and/or graft-linking agent having two or more ethylenically unsaturated radicals capable of free-radical polymerization,

- b4) from 0 to 20% by weight of one or more other, non-crosslinking ethylenically unsaturated monomers capable of free-radical polymerization.

In particular, the entirety of the constituents b1) and b2) and, where appropriate, b3) and/or b4) gives 100% by weight, thus indicating that within the matting agent, there are no other components. Further, the glass transition temperature T_{mg} of the matting agent is at least 20°C.

The rejection of claim 2 under 35 U.S.C. 112, first and second paragraphs is believed to be obviated by the present amendment. The claim as now amended indicates that the matrix is selected from the specified listing of polymers or is a mixture or blend of those polymers. The Examiner's contention that the claim is open to any thermoplastic polymer has thus been obviated by making the claim drawn to a closed set of polymers. Accordingly, the rejection should be withdrawn.

Claims 1-6 and 8-12 stand rejected under 35 U.S.C. 102(e) or under 35 U.S.C. 103 over Yang et al ('188). Yang '188 discloses a polymeric article having a frosted or surface textured finish. In particular, the compositions of Yang '188 are required to contain beads that are highly crosslinked (see column 2, lines 23, 33, 42 and 55). Highly crosslinked is defined in the paragraph bridging columns 4 and 5 as meaning that the particulate material can not be dissolved at all in a strong organic solvent. More importantly, when disclosing an amount of crosslinking agent present in their compositions, Yang '188 disclose amounts of 0.5% or higher (e.g. 0.5-1.5%, preferably 0.9% allyl methacrylate at column 6, line 2; 0.81% ALMA at column 8, line 8 and throughout the examples). However, the present invention requires that the amount of crosslinking agent and/or graft-linking agent present in the matting agent be less than 0.5% by weight (0.01-less than 0.5% in claim 1), preferably 0.05-0.49% by weight (claim 13), more preferably 0.1-0.4% by weight (claim 14). Since the amount of crosslinking agent greatly affects the physical properties of the resulting polymer

composition, the compositions taught by Yang '188 which contain substantially more crosslinking agent in their polymer beads than permitted by the present invention matting agent would have completely different characteristics and properties within the resulting compositions. As such, Yang '188 cannot anticipate nor render obvious the present invention, since there is nothing within Yang '188 to suggest reducing their crosslinking agent amount.

In fact, reducing the crosslinking agent of Yang '188 would go completely against the teachings of Yang '188 which requires that their polymeric beads be highly crosslinked, which they have defined throughout their specification as being at least 0.5% by weight of crosslinking agent, with the exemplified amounts being 0.81% by weight. (In fact, the only examples with lower than 0.5% by weight of crosslinking agent are Comparative Examples in the table at the bottom of column 7, which are taught away from since they show poor performance in the Yang '188 compositions). These highly crosslinked polymeric beads of the Examples shown in Yang '188 all contain nearly 25% by weight of styrene and do not contain any C1-C6 alkyl acrylate. The present invention cannot contain such a high amount of styrene (component b4 of the matting agent is the only component that could correspond to styrene, and it can be present in no more than 20%), and must contain from 5 to 50% by weight of a C1-C6 alkyl acrylate. As such, the compositions of Yang et al '188 cannot correspond to those of the present invention, and cannot suggest those of the present invention, since there is nothing within Yang et al '188 that would lead one of ordinary skill to alter the teachings therein to obtain the present compositions. Accordingly, the rejections should be withdrawn.

Claims 1-4 and 6-12 stand rejected under 35 U.S.C. 102(e) or under 35 U.S.C. 103 over Yang et al '612. The compositions of Yang '612 all require the use of a crosslinked polymer dispersed in a polymeric matrix, where the crosslinked polymer must contain a filler.

In particular, column 5, lines 16-65 describe the inert filler and specifically state that the amount of filler contained in the crosslinked polymer is from 0.1 to 15%, preferably from 0.2 to 10% and more preferably from 0.3 to 5% by weight of the crosslinked polymer. However, that is not possible in the present invention as claimed. In particular, the present claims require that the matting agent contain components b1, b2, b3 and optionally b4, wherein the total of b1, b2, b3 and b4(if present) must equal 100%. That specifically excludes the presence of other components within the matting agent, beyond those specifically listed, thus excluding the presence of a filler. As the Examiner is well aware, the presence or absence of a filler has significant impact on the properties of the resulting compositions. Thus, one of ordinary skill in the art would have no reason to modify the compositions of Yang '612 to remove the filler from the crosslinked particles, nor to alter the other parts of the composition to meet the present invention requirements.

Further, Yang '612 teaches away from the low level of crosslinking agent of the present invention (0.01-less than 0.5%) at column 10, beginning at line 21, where Yang '612 states that "if the crosslinking agent is too low, that is, below about 0.5%, the crosslinked polymer particles may 'smear' into thermoplastic matrix material after multiple passes during extrusion, resulting in blurred or non-differentiated mineral-like appearance." The reference further states that the crosslinker is preferably present in amounts from 0.5 to 5%, more preferably from 1 to 4%. This cannot suggest the present invention which requires that the crosslinking agent in the matting agent must be less than 0.5% (claim 1), preferably from 0.05 to 0.49% (claim 13), and more preferably from 0.1 to 0.4 % (claim 14). As such, Yang '612 cannot render the present invention anticipated nor obvious and the rejections should be withdrawn.

Claims 1, 2, 5, 10 and 11 stand provisionally rejected for obviousness type double patenting over claims 24-41 and 43-46 of copending application 10/575,929. None of the

claims in the reference application contain a suggestion with respect to the content of a matting agent as required in the present invention. In order for the claims of the reference application to render the present invention obvious, there has to be some reasonable correlation between what is claimed in the reference application and what is claimed in the present application. In this case, that reasonable correlation is not present, as the reference application contains nothing within the claims regarding the content of a matting agent that would meet or suggest the required elements of the present invention. As such, the obviousness type double patenting rejection is unsustainable and should be withdrawn.

Applicants submit that the application is now in condition for allowance and early notification of such action is earnestly solicited.

Respectfully submitted,

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